

CLAIMS

1. The use of a thermal and/or acoustic insulation product based on mineral fibers, above 150°C, especially between 200 and 500°C, or even up to 700°C and higher in the case of rock fibers, in which the product comprises at least 1%, or at least 2% and even more than 4% by weight of a cured organic resin and releases less than 50 mg/kg (of product), especially less than 20 mg/kg and even less than 15 mg/kg of formaldehyde and less than 50 mg/kg (of product), especially less than 20 mg/kg and even less than 10 mg/kg of methyl isocyanate (MIC) when it is heated to 350°C for at least 15 minutes.

2. The use of a thermal and/or acoustic insulation product based on mineral fibers, above 150°C, especially between 200 and 500°C, or even up to 700°C and higher in the case of rock fibers, for example as claimed in the preceding claim, in which the product comprises at least 1%, or at least 2% and even more than 4% by weight of binder obtained from a sizing composition, the resin or resin mixture of which consists substantially of at least one epoxy-type resin whose EEW value is between 150 and 2000, preferably at least 160 and/or at most 700, or even at least 170 and/or at most 300.

3. The use of a thermal and/or acoustic insulation product as claimed in either of the preceding claims, **characterized in that** the product furthermore comprises a web of mineral fibers, especially glass fibers, the grammage of which is, for example, between 10 and 300 g/m<sup>2</sup>, placed on at least one of the outer surfaces of said insulating product, **and in that** said web comprises at least 1%, or at least 2% and even more than 4% by weight of binder obtained from a sizing composition, the resin or resin mixture of which consists substantially of at least one epoxy-type resin

whose EEW value is between 150 and 2000, preferably at least 160 and/or at most 700, or even at least 170 and/or at most 300.

4. The use as claimed in one of the preceding claims, in which the product is used to insulate walls heated to temperatures of above 150°C, especially between 200 and 500°C, or even up to 700°C and higher in the case of rock fibers, especially walls of ovens, pipes, fire-resistant components, transportation equipment and equipment intended for applications in the nuclear industry.

5. The use as claimed in one of the preceding claims, in which the product is manufactured by a process which comprises the following steps:

a) preparation of a sizing composition consisting substantially of water, a resin or resin mixture consisting substantially of at least one water-dispersible epoxy resin whose EEW value is between 150 and 2000, preferably at least 160 and/or at most 700, or even at least 170 and/or at most 300, at least one amine hardener and additives (in parts calculated per 100 parts of dry resin), especially between 0.1 and 2% of silane and especially between 0 and 15% of a mineral oil;

b) fiberizing, especially by the internal centrifugal process or external centrifugal process, of a molten mineral composition and spraying of the sizing composition compared in step a) onto the fibers; and

c) curing of the sizing composition in an oven, especially at around 250°C, in order to form a compressible fiber blanket.

6. The use as claimed in claim 5, **characterized in that** the resin of the sizing composition of step a) comprises a water-dispersible epoxy resin of the

glycidyl ether type and an amine hardener whose flashpoint is above 150°C.

7. The use as claimed in claim 5 or claim 6, **characterized in that** at least one epoxy resin is a glycidyl ether having a curing index  $n$  of less than 1 and preferably less than 0.2.

8. The use as claimed in one of claims 5 to 7, **characterized in that** at least one resin of the sizing composition of step a) is based on a water-dispersible epoxy resin of the novolac type.

9. The use as claimed in one of claims 5 to 8, **characterized in that** the NH number of at least one amine hardener is between 20 and 300.

10. The use as claimed in claim 9, **characterized in that** at least one amine hardener is chosen from the following components or mixtures of components: aliphatic amines, cycloaliphatic amines, aromatic amines, imidazoles, polyfunctional hydrazides and dicyandiamide (DCN).

11. The use as claimed in one of the preceding claims of an insulating product whose density is between 4 and 200 kg/m<sup>3</sup>.

12. A thermal and/or acoustic insulation product that can be used above 150°C, especially between 200 and 500°C, or even up to 700°C and higher in the case of rock fibers, which comprises at least 1%, or at least 2% and even more than 4% by weight of binder obtained from a sizing composition, the resin or resin mixture of which consists substantially of at least one epoxy-type resin whose EEW value is between 150 and 2000, preferably at least 160 and/or at most 700, or even at least 170 and/or at most 300, **characterized in that** it

furthermore comprises a web of mineral fibers, especially glass fibers, the grammage of which is, for example, between 10 and 300 g/m<sup>2</sup>, placed on at least one of the outer surfaces of said insulating product, **and in that** said web comprises at least 1%, or at least 2% and even more than 4% by weight of binder obtained from a sizing composition, the resin or resin mixture of which consists substantially of at least one epoxy-type resin whose EEW value is between 150 and 2000, preferably at least 160 and/or at most 700, or even at least 170 and/or at most 300.